WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. A method of evaluating a candidate abnormality in a medical image, comprising the steps of:

obtaining a medical image having a candidate abnormality;

segmenting the candidate abnormality in the medical image;

extracting at least one predetermined feature from the segmented candidate abnormality;

comparing the candidate abnormality with plural database abnormalities including known malignant abnormalities and known benign abnormalities, including comparing the at least one extracted feature from the at least one candidate abnormality with corresponding extracted features extracted from the database abnormalities;

identifying, based on the comparing step, at least one database malignant abnormality and at least one database benign abnormality having similarity to the candidate abnormality; and

displaying the database abnormalities identified in the identifying step.

2. The method of Claim 1, wherein the extracting step comprises:

extracting at least one feature from the group comprising effective diameter, degree of circularity, contrast, degree of irregularity, pixel standard deviation, radial gradient index (RGI), and computed tomography (CT) value.

3. The method of Claim 1, wherein the extracting step comprises:

extracting at least two features from the group comprising effective diameter, degree of circularity, contrast, degree of irregularity, pixel standard deviation, radial gradient index (RGI), and computed tomography (CT) value.

4. The method of Claim 3, wherein said at least two features comprise effective diameter and CT value.

5. The method of Claim 1, wherein the extracting step comprises:

extracting at least three features from the group comprising effective diameter, degree of circularity, contrast, degree of irregularity, pixel standard deviation, radial gradient index (RGI), and computed tomography (CT) value.

6. The method of Claim 5, wherein said at least three features comprise effective diameter, CT value, and RGI.

7. The method of Claim 1, wherein the comparing step further comprises:

calculating at least one similarity measure based on an absolute difference between at least one extracted feature of the candidate abnormality and at least one corresponding feature of a database abnormality.

8. The method of Claim 1, wherein the step of segmenting a candidate abnormality in a medical image further comprises:

obtaining a CT medical image.

9. The method of Claim 1, wherein the segmenting step further comprises:

using a region growing technique.

10. The method of Claim 9, wherein the segmenting step further comprises:

region growing from a point included in a manually generated outline.

11. The method of Claim 1, wherein the comparing step comprises:

using an artificial neural network (ANN); and

determining a similarity measure based on an output of the ANN.

12. The method of claim 11, wherein the using step comprises:

using an ANN having at least three levels.

13. The method of Claim 11, wherein the determining a similarity measure further comprises:

identifying at least one similar malignant database abnormality and at least one benign abnormality based on an output of the ANN; and

displaying the database abnormalities identified in the identifying step.

14. The method of Claim 13, wherein the displaying step comprises displaying at least one candidate abnormality with at least one malignant abnormality and at least one benign abnormality on a common display.

15. The method of Claim 11, wherein the using step further comprises:

training the ANN based on at least one subjective similarity rating.

16. The method of Claim 11, wherein the using step comprises:

using an ANN trained at least in part by means of at least one subjective similarity rating.

17. The method of Claim 1, wherein the displaying step comprises displaying at least one candidate abnormality with at least one malignant abnormality and at least one benign abnormality on a common display.

18. A system implementing the method of any one of Claims 1 through 17.

19. A computer program product storing program instructions for execution on a computer system, which when executed by the computer system, cause the computer system to perform the method recited in any one of Claims 1 through 17.